

11 April 1957

MEMORANDUM FOR: THE RECORD

SUBJECT : P-125D - Contract No. RD-113 - Task III  
35 mm Time Lapse Camera

1. TIME AND PLACE OF MEETING: The meeting was held 29 March  
at [REDACTED]

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2. ATTENDANCE: [REDACTED]

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3. PURPOSE: To determine the status of this project, due to significant changes

4. DISCUSSION:

A general discussion of this project was held in order to firm up any uncertainty due to changes or misunderstandings on our or the manufacturer's part.

Features of Camera Box:

1. Size - approximately 4" x 6" x 10"
2. Construction housing, plaster cast aluminum
3. Water and fungus proof
4. Working parts held to a minimum
5. Ball bearings used wherever applicable
6. Noise, reduced to utmost minimum
7. Weight reduced, but not at a sacrifice of reliability
8. Moveable parts not to stick or bind due to temperature changes 0 to 120° F
9. Exterior finish wrinkle black
10. Three tripod fittings are placed in the center of balance on the camera top, bottom, and right side.

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Lenses:

1. Manufacturer: Wollensak Optical Company
2. Number of coated lenses: 7
3. Focal lengths
4. 25 mm; 50 mm; 100 mm; 300 mm; 450 mm; 600 mm  
Raptor series
5. Each lens selected from stock and the manufacturer will supply lenses selected with regards to resolution and definition capabilities. These lenses will again be checked by Bulova by means of a collimator and nodal slide system. Images of a 6/2 resolution target will be produced photographically the length of the diagonals of camera format. Compliance with specifications will be determined upon reading resolution values from exposures produced. Any lens failing tests will be rejected and returned to manufacturer for compliance.
6. Each lens will have a sun shade
7. Each lens will have 3 filters
8. Aero 2, 15-G-deep yellow, 25A
9. Each lens will have dust caps
10. A master control will be coupled to each lens. This obviates building a separated automatic iris control into each lens.
11. Each lens can be separated from the automatic control and set manually.
12. Each lens can be focused through prism. This will permit the operator to assure himself of correct focus and also arrange composition.
13. Each lens can be set on scale for distances which are known or judged, or set by range finder.

Automatic Switch:

1. An "on and off" automatic switch will stop the camera when the light level falls below the sensitivity of the film. (Dusk) It will start the camera when the light level again approaches the sensitivity of the film. (Twilight) Lens film combination.

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2. The switch can be phased out of the circuit and the camera can run continuously.
3. The camera can be started or stopped by radio frequency, also light waves, manually, seismic disturbance, light flash, etc.

Film:

1. Standard motion picture film is used.
2. Black and White - Color
3. A knob indicating ASA film ratings - 32; 100; 200; 400; and 800 is phased into the master automatic iris control. This will allow a wide selection of film.
4. Lengths of film
5. 100 feet, 200 feet, 400 feet, and 1000 feet.
6. Separate film magazines are attached to the camera for different film lengths. Similar to magazines used on the Eastman 16 mm cine special.

Shutter:

1. Adjustable Rotary Disk
2. Shutter can be set for the following speeds in fraction of seconds: 1/25th; 1/100th; 1/200th; 1/400th; and 1/800.

Format:

1. The size of image is one inch square.

Time Lapse:

1. One picture every second or 5 seconds; 10 seconds; 15 seconds; 30 seconds; 1 minute.
2. One picture every 5 minutes; 10 minutes; 15 minutes; 30 minutes; and one hour.
3. Burst of pictures
4. A burst of rapid pictures up to 8 or 10 can be made at anytime.

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Number of Pictures:

1. Any number of pictures between 1 and 12,000 can be made.

Length of time camera can continuously operate without changing film:

1. One year, 135 days, day and night
2. This is possible by changing batteries and making one picture every hour using 1000 feet film.
3. The shortest time the camera will operate without changing film is 20 minutes. In this case, one picture is made every second, using 100 feet film.

Batteries:

1. The camera will be powered by mercury cadmium batteries.
2. A spare battery is supplied.

Battery Case:

1. The battery case is waterproof.
2. A small radio receiver can also be contained in battery case whereby control of the camera may be effected by a radio frequency pulse.

Cable:

1. Two 25 foot lengths of water-tight cable and connections between camera and battery.

Flexibility:

1. The camera and its appertenances can be carried in two cases. If the requirements are known, it will not be necessary to transport the entire outfit. If the requirement is partially known or unknown, then it is advasable to take it all.
2. This camera and its related accessories should fulfill the majority of requests for obtaining pictures.

Number of Units: 6

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5. CONCLUSION:

The foregoing is the latest rundown of accessories and camera functions. Fabrication of units is now in process and delivery is expected o/a 30 June 1957.

6. RECOMMENDATIONS: Additional funds no doubt will be required by the manufacturer to----

a. Package the lenses, filters, sunshades, light meter, statismaster camels hair brush, data book and pencils, fifty foot steel tape, small screw driver, adjustable 8 inch crecent wrench, focusing cloth, and changing bag. These articles should be compartmented in a rugged portable aluminum suitcase.

b. Package the camera, battery and case, spare rolls of different ASA film speeds, tripod spider, small link chain to fasten tripod to floor or other solid support, special tripod adaptor to clamp camera in trees, telephone poles, etc., in a rugged portable aluminum suitcase.

c. In order to keep this equipment together, and not become separated, it is vitally important to package it properly in portable cases.

d. A sturdy commercial tripod like the Hollywood professional junior is necessary. The tripod to be cased in a regular canvas bag. This bag has a long strap which is strung over the shoulder for ease in carrying tripod.

e. All these items mentioned except camera, magazines, lenses, filters sunshades, dust caps, batteries and case, cables and connectors are supplied by the manufacturer. The other items can be supplied from stock or purchased.

f. Having had unlimited field experience in photography, away from home base, I cannot emphasize the above recommendations too strongly.

TBS/APD

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## Distribution:

Orig. - P-125D  
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